UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
2161	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
	10/723,086	TREPESS ET AL.
Office Action Summary	Examiner	Art Unit	
	CHELCIE DAYE	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>28 April 2008</u>.

2a) ☐ This action is FINAL.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-10,12,13,15,17-28 and 33</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-10,12,13,15,17-28 and 33</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail. Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This action is issued in response to applicant's RCE filed April 28, 2008.

2.   Claims 1-10,12-13,15,17-28, and 33 are presented. No claims are added and

claims 11,14,16,and 29-32 remain cancelled.

3.   Claims 1-10,12-13,15,17-28, and 33 are pending.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   **Claims 1-2,4-5,7-8,10,12-13,15,17-18,23,26-28, and 33 are rejected under 35**

U.S.C. 103(a) as being unpatentable over Saffer (US Patent No. 6,990,238) filed

September 30, 1999, in view of "A Self-Organizing Semantic Map for Information

Retrieval", By: Xia Lin, Dagobert Soergel, and Gary Marchionini, Published 1991;

hereinafter referred to as 'Lin'.

Regarding Claims 1,23, and 33, Saffer discloses an information retrieval

apparatus comprising:

a mapping processor operable to receive data representative of a map of

information items from a set of information items identified in a search (column

19, lines 4-38, Saffer), the map of information items providing the identified

information items with respect to positions in an array in accordance with a mutual similarity of the information items, similar information items mapping to similar positions in the array (Fig.18; column 17, lines 36-57, Saffer), and to process the map data to form a hierarchical clustering of information items (columns 8-9, lines 53-67 and 1-4, respectively, Saffer) providing a first clustering level of information items and at least one other clustering level of information items for clusters of information items within the first level clusters (column 10, lines 34-40, Saffer),

a display processor operable in combination with a graphical user interface (Fig.18, Saffer) to display a representation of at least some of the positions of the array correspond to identified information items as an n-dimensional display of display points within a display area of a graphical display, the display area corresponding to at least a portion of the array (Fig.4A & column 17, lines 36-57; columns 18-19, lines 64-67 and 1-8, respectively, Saffer),

wherein, when viewing a first cluster in one of the hierarchical levels which is present in a view of the display points within the display area of the graphical display (columns 8-9, lines 53-67 and 1-4, respectively, Saffer), the display processor is operable to generate data representative of an indication which is displayed on the graphical user interface providing a user with a relative direction within the n-dimensional space of the location of a second cluster within the same hierarchical level and can be used to navigate to the second cluster within the n-dimensional display (column 5, lines 1-13; column 20, lines 5-32; column

22, lines 10-27; column 29, lines 21-33, Saffer), and the graphical user interface

(Fig.16, Saffer) is operable to display the relative direction of the second cluster

within the display area of the graphical display with respect to a position of the

first cluster in the display area (column 6, lines 13-50; column 20, lines 5-32;

column 29, lines 21-33, Saffer), and the data representing the number of

information items within the cluster is displayable with respect to the (column 13,

lines 5-14, Saffer). However, Saffer is silent with respect to the search using a

self-organizing map and a direction indicating symbol providing the user with

information outside of the display area. On the other hand, Lin discloses the

search using a self-organizing map (pg. 262, "Abstract", Lin) and a direction

indicating symbol providing the user with information outside of the display area

(see pg.266, Figs.4(a-c) and section 4. "A prototype system", Lin). Saffer and Lin

are analogous art because they are from the same field of endeavor of

information retrieval. It would have been obvious to one of ordinary skill in the art

at the time of the invention to incorporate Lin's teachings into the Saffer system.

A skilled artisan would have been motivated to combine as suggested by Lin at

pg. 267, 2nd paragraph, in order to conceptualize an information retrieval

approach which uses traditional search techniques and the map as a browsing

aid to support ordering, linking, and browsing information gathered by the filters.

Regarding Claim 2, the combination of Saffer in view of Lin, disclose an

apparatus wherein the information items include a plurality of characterizing

information features, the characterizing information features of each information item being used to form a feature vector for each information item (columns 9-10, lines 62-67 and 1-15, respectively, Saffer), the feature vector being used to form the map data by mapping the information item onto a position within the array (column 19, lines 31-38, Saffer).

Regarding Claim 4, the combination of Saffer in view of Lin, disclose an apparatus wherein the characterizing information feature associated with each first level cluster and the other characterizing information feature associated with each cluster within the other clustering level of information items are formed from a most common characterizing information feature present in the information items associated with each cluster (column 12, lines 60-67, Saffer).

Regarding Claim 5, the combination of Saffer in view of Lin, disclose an apparatus wherein the clusters of information items within one of the lower level clusters are associated with one another, whereas the other clusters of the first level are additional clusters of information items with respect to the information items within the lower level cluster (column 2, lines 23-39, Saffer).

Regarding Claim 7, the combination of Saffer in view of Lin, disclose an apparatus wherein the information items comprise textual information, the characterizing information features being words (columns 15-16, lines 60-67 and

1-2, respectively, Saffer), and the feature vector for an information item is representative of a set of frequencies of occurrence, within that information item, of each of a group of words (column 11, lines 23-51, Saffer).

Regarding Claim 8, the combination of Saffer in view of Lin, disclose an apparatus wherein the information items include textual information, the characterizing information features being words (columns 15-16, lines 60-67 and 1-2, respectively, Saffer), the positions within the array being mapped by mutual similarity of at least a part of the textual information (column 17, lines 36-57, Saffer).

Regarding Claim 10, the combination of Saffer in view of Lin, disclose an apparatus wherein the information items are pre-processed for mapping (columns 10-11, lines 64-67 and 1-2, respectively, Saffer) by excluding words occurring within the textual information having less than a threshold frequency amongst the set of information items (column 30, lines 24-32, Saffer).

Regarding Claims 12,18,27 and 28, the combination of Saffer in view of Lin, disclose an apparatus wherein the display area includes at least two areas (Fig.16, Saffer), one area providing an n-dimensional representation of the first hierarchical level of clusters and the other area providing an n-dimensional

representation of the other hierarchical level of clusters, where n is an integer

(column 21, lines 14-28 and column 22, lines 10-27, Saffer).

Regarding Claim 13, the combination of Saffer in view of Lin, disclose an

apparatus comprising

search processor for carrying out a word-related search of the information

items (column 18, lines 64-67, Saffer);

the search processor and the graphical user interface being arranged to

co-operate so that only those display points corresponding to identified

information items are displayed (column 19, lines 4-38, Saffer).

Regarding Claim 15, the combination of Saffer in view of Lin, disclose an

apparatus wherein the display processor is operable to generate data

representative of the number of information items within the other cluster (column

13, lines 5-14, Saffer), the number of information items being associated with the

indication of the relative direction in the n-dimensional space of the other cluster

with respect to the first cluster (column 29, lines 21-33, Saffer).

Regarding Claim 17, the combination of Saffer in view of Lin, disclose an

apparatus further comprising a user control for selecting information items or

clusters of information items within the n-dimensional space using a user

controlled pointer (Fig.19; column 21, lines 40-54, Saffer), wherein the number of

information items are display with respect to the indication of relative direction, in response to the pointer being positioned over the indication (column 30, lines 50-62, Saffer).

Regarding Claim 26, the combination of Saffer in view of Lin, disclose the method further comprising

displaying a representation of at least some of the positions of the array as an n-dimensional display array of display points within a display area of a graphical display (columns 18-19, lines 64-67 and 1-8, Saffer).

6.   **Claims 3,6,9,19,20,24, and 25, are rejected under 35 U.S.C. 103(a) as being unpatentable over Saffer (US Patent No. 6,990,238) filed September 30, 1999, in view of "A Self-Organizing Semantic Map for Information Retrieval", By: Xia Lin, Dagobert Soergel, and Gary Marchionini, Published 1991; hereinafter referred to as 'Lin', and further in view of Doerre (US Patent No. 6,446,061) filed June 30, 1999.**

Regarding Claims 3 and 24, the combination of Saffer in view of Lin, disclose all of the claimed subject matter, as stated above. However, the combination of Saffer in view of Lin, are silent with respect to providing the first clustering level of information items with a characterizing information feature associated with each of the first level clusters of information items and to provide

a characterizing information feature for the clusters of information items within the first level clusters at the other hierarchical level. On the other hand, Doerre discloses providing the first clustering level of information items with a characterizing information feature associated with each of the first level clusters of information items and to provide a characterizing information feature for the clusters of information items within the first level clusters at the other hierarchical level (column 17, lines 24-49, Doerre). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Doerre's teachings into the Saffer and Lin system. A skilled artisan would have been motivated to combine as suggested by Doerre at column 4, lines 22-28, in order to be able to improve the ability and flexibility of the content classifier, so as to cope with the increasing number of documents to be analyzed in a reasonable amount of time.

Regarding Claim 6, the combination of Saffer in view of Lin, and further in view of Doerre, disclose an apparatus wherein the characterizing information item associated with each cluster is the most common word of the textual information associated with each of the information items within each cluster (column 17, lines 14-30, Saffer).

Regarding Claim 9, the combination of Saffer in view of Lin, and further in view of Doerre, disclose an apparatus wherein the information items are pre-

processed for mapping (columns 10-11, lines 64-67 and 1-2, respectively, Saffer)

by excluding words occurring within the textual information having more than a

threshold frequency amongst the set of information items (column 13, lines 43-

54, Doerre).

        Regarding Claim 19, the combination of Saffer in view of Lin, and further

in view of Doerre, disclose a video acquisition and processing apparatus

comprising an information retrieval apparatus having a mapping processor

operable to receive data representative of a map of information items from a set

of information items identified in a search (column 19, lines 4-38, Saffer) using a

self organizing map (pg. 262, "Abstract", Lin), the map of information items

providing the identified information items with respect to positions in an array in

accordance with a mutual similarity of the information items, similar information

items mapping to similar positions in the array (Fig.18; column 17, lines 36-57,

Saffer), and to process the map data to form a hierarchical clustering of

information items (columns 8-9, lines 53-67 and 1-4, respectively, Saffer)

providing a first clustering level of information items and at least one other

clustering level of information items for clusters of information items within the

first level clusters (column 10, lines 34-40, Saffer),

        a display processor operable in combination with a graphical user

interface (Fig.18, Saffer) to display a representation of at least some of the

positions of the array correspond to identified information items as an n-

dimensional display array of display points within a display area of a graphical

display, the display area corresponding to at least a portion of the array (Fig.4A &

column 17, lines 36-57; columns 18-19, lines 64-67 and 1-8, respectively, Saffer),

wherein, when viewing a first cluster in one of the hierarchical levels which

is present in a view of the display points within the display area of the graphical

display (columns 8-9, lines 53-67 and 1-4, respectively, Saffer), the display

processor is operable to generate data representative of an indication which is

displayed as a direction indicating symbol (see Figs.4(a-c), Lin) on the graphical

user interface providing a user with a relative direction within the n-dimensional

space of the location of a second cluster within the same hierarchical level which

is outside the display area (see pg.266, Figs.4(a-c) and section 4. "A prototype

system", Lin), and can be used to navigate to the second cluster within the n-

dimensional display (column 5, lines 1-13; column 20, lines 5-32; column 22,

lines 10-27; column 29, lines 21-33, Saffer), and the graphical user interface

(Fig.16, Saffer) is operable to display the direction indicating symbol indicating

the relative direction of the second cluster within the display area of the graphical

display with respect to a position of the first cluster in the display area (column 6,

lines 13-50; column 20, lines 5-32; column 29, lines 21-33, Saffer), and the data

representing the number of information items within the cluster is displayable with

respect to the direction indicating symbol (column 13, lines 5-14, Saffer), the

information items including video data with the textual information (column 1,

lines 44-49, Doerre).

Regarding Claim 20, the combination of Saffer in view of Lin, and further in view of Doerre, disclose the video acquisition and processing apparatus further comprising

a repository containing the information items (column 8, lines 40-48, Doerre), and

a data communications network for connecting the repository with the information retrieval apparatus (column 5, lines 38-46, Saffer).

Regarding Claim 25, the combination of Saffer in view of Lin, and further in view of Doerre, disclose the apparatus wherein the information items include a plurality of characterizing information features, the characterizing information features of each information item being used to form a feature vector for each information item (columns 9-10, lines 62-67 and 1-15, respectively, Saffer), the feature vector being used to form the map data by mapping the information item onto a position within the array (column 19, lines 31-38, Saffer).

7.   **Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saffer (US Patent No. 6,990,238) filed September 30, 1999, in view of "A Self-Organizing Semantic Map for Information Retrieval", By: Xia Lin, Dagobert Soergel, and Gary Marchionini, Published 1991; hereinafter referred to as 'Lin',**

further in view of Doerre (US Patent No. 6,446,061) filed June 30, 1999, and further

in view of Branscomb (US Patent No. 5,977,992) filed September 5, 1997.

Regarding Claim 21, the combination of Saffer in view of Lin, and further
in view of Doerre, disclose all of the claimed subject matter, as stated above.
However, Saffer in view of Lin, and further in view of Doerre, are silent with
respect the information items include a representative key stamp providing a
representative image from the information item. On the other hand, Branscomb
discloses the information items include a representative key stamp providing a
representative image from the information item (column 5, lines 18-32,
Branscomb). It would have been obvious to one of ordinary skill in the art at the
time of the invention to incorporate Branscomb's teachings into the Saffer in view
of Lin, and in view of Doerre system. A skilled artisan would have been motivated
to combine as suggested by Branscomb at column 13, lines 55-63, in order to
organize and assemble images in a relational graphic space via a content image,
which provides a powerful interactive visual display. As a result, the system is
therefore capable of alleviating the amount of time needed as well as decreasing
the tediousness of the process.

Regarding Claim 22, the combination of Saffer in view of Lin, further in
view of Doerre, and further in view of Branscomb, disclose the video acquisition
and processing apparatus wherein the characterizing information feature

associated with each first level cluster and the other characterizing information

feature associated with each cluster within the other clustering level of

information items are formed from a most common characterizing information

feature present in the information items associated with each cluster (column 6,

lines 48-52, Doerre) and the common characterizing information feature

associated with a cluster includes a representative key stamp, which is common

to the cluster (column 13, lines 34-44, Branscomb).

Response to Arguments

Applicant's arguments with respect to the newly amended claims have been

considered but are moot in view of the new ground(s) of rejection.

Points of Contact

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to CHELCIE DAYE whose telephone number is (571)272-

3891. The examiner can normally be reached on M-F, 7:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Apu Mofiz can be reached on 571-272-4146080. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Chelcie Daye
Patent Examiner
Technology Center 2100
July 15, 2008

/Apu M Mofiz/
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